

Application No.: 10/525,674
Amendment Dated January 4, 2007

Docket No.: 13111-00002-US

AMENDMENTS TO THE CLAIMS

Listing of Claims

1. (Previously presented) A method for the fermentative production of L-methionine, which comprises the following steps:

- a) fermenting in a medium cells of coryneform bacterium *Corynebacterium glutamicum* for producing L-methionine, said coryneform bacteria expressing at least one heterologous nucleotide sequence which ^{encodes} ~~codes for~~ a protein with homoserine O-acetyltransferase (metA) activity, wherein said heterologous nucleotide sequence comprises a nucleotide sequence encoding a metA protein derived from *Corynebacterium diphtheriae* having an amino acid sequence as set forth in SEQ ID NO: 2;
- b) concentrating L-methionine in the medium or in the bacterial cells, and
- c) isolating L-methionine.

2-4. (Cancelled)

5. (Previously presented) The method as claimed in claim 1, wherein the metA-encoding nucleotide sequence comprises a coding sequence as set forth in SEQ ID NO:1.

6. (Cancelled)

7. (Previously presented) The method as claimed in claim 1, wherein the ^{metA encoding} ~~coding metA~~ sequence is a DNA or RNA which can be replicated in coryneform bacteria or is stably integrated into the chromosome.

8. (Previously presented) The method as claimed in claim 7, wherein

- a) a bacteria strain transformed with a plasmid vector carrying at least one copy of the ^{metA encoding} ~~coding metA~~ sequence under the control of regulatory sequences is used, or
- b) a strain in which the ^{metA encoding} ~~coding metA~~ sequence has been integrated into the bacterial chromosome is used.

Application No.: 10/525,674
Amendment Dated January 4, 2007

Docket No.: 13111-00002-US

9. (Previously presented) The method as claimed in claim 1, wherein the ~~coding metA~~^{meth encoding} sequence is overexpressed.

10. (Currently amended) The method as claimed in claim 1, wherein bacteria are fermented in which additionally at least one further gene of the biosynthetic pathway of L-methionine has been ~~amplified or mutated~~ overexpressed ~~such that its activity is not influenced by metabolic metabolites.~~

11. (Cancelled)

12. (Currently amended) The method of claim 1, wherein coryneform bacteria are fermented in which, at the same time, a lysC gene derived from a coryneform bacterium, which encodes an aspartate kinase, is overexpressed ~~or mutated in such a way that the activity of the corresponding protein is influenced by metabolic metabolites to a smaller extent, if at all, compared to a nonmutated protein.~~

13. (Cancelled)

14. (Previously presented) The method of claim 17, wherein the coryneform bacterium is of the species *Corynebacterium glutamicum*.

15-16. (Cancelled)

17. (Currently amended) A method for the production of L-methionine, which comprises the following steps:

- a) fermenting in a medium cells of a coryneform bacterium for producing L-methionine, said coryneform bacteria expressing at least one heterologous nucleotide sequence which ~~codes~~^{encodes} for a protein with homoserine O-acetyltransferase (metA) activity, wherein the heterologous ~~metA encoding~~ nucleotide sequence is less than 100% homologous to the metA encoding

Application No.: 10/525,674
Amendment Dated January 4, 2007

Docket No.: 13111-00002-US

~~sequence from *Corynebacterium glutamicum* ATCC 13032~~ comprises a nucleotide sequence having 95% identity or more to the sequence as set forth in SEQ ID NO: 1;

- b) concentrating L-methionine in the medium or in the bacterial cells; and
- c) isolating L-methionine.

18. (Previously presented) The method of claim 17, wherein the metA-encoding nucleotide sequence comprises ~~a coding~~ ^{nucleotide} sequence as set forth in SEQ ID NO:1.

19. (Currently amended) The method of claim 17, wherein the metA-encoding nucleotide sequence ~~codes for~~ ^{encodes} a protein with metA activity, said protein comprising an amino acid sequence as set forth in SEQ ID NO: 2 ~~or a fragment of SEQ ID NO: 2 having metA activity.~~

20. (Previously presented) The method of claim 17, wherein the ~~coding metA~~ ^{metA encoding} sequence is a DNA or RNA which can be replicated in coryneform bacteria or is stably integrated into the chromosome.

21. (Previously presented) The method of claim 17, wherein

- a) a bacteria strain transformed with a plasmid vector carrying at least one copy of the ~~coding metA~~ ^{metA encoding} sequence under the control of regulatory sequences is used, or
- b) a strain in which the ~~coding metA~~ ^{metA encoding} sequence has been integrated into the bacteria/ chromosome is used.

22. (Previously presented) The method of claim 17, wherein the ~~coding metA~~ ^{metA encoding} sequence is overexpressed.

23. (Currently amended) The method of claim 17, wherein bacteria are fermented in which additionally at least one further gene of the biosynthetic pathway of L-methionine has been ~~amplified or mutated~~ overexpressed ~~such that its activity is not influenced by metabolic metabolites.~~

Application No.: 10/525,674
Amendment Dated January 4, 2007

Docket No.: 13111-00002-US

24. (Currently amended) A method for the production of L-methionine, which comprises the following steps:

- a) fermenting in a medium cells of a coryneform bacterium for producing of L-methionine, said coryneform bacteria expressing at least one heterologous nucleotide sequence which codes for a protein with homoserine O-acetyltransferase (metA) activity, wherein said heterologous nucleotide sequence comprises a nucleotide sequence encoding a metA protein having an amino acid sequence with 95% homology or more to the sequence as set forth in SEQ ID NO: 2 derived from *Corynebacterium diphtheriae*;
- b) concentrating L-methionine in the medium or in the bacterial cells; and
- c) isolating L-methionine.

25-26. (Cancelled)

27. (Previously presented) The method of claim 24, wherein the ^{metA encoding} coding metA sequence is a DNA or RNA which can be replicated in coryneform bacteria or is stably integrated into the chromosome.

28. (Previously presented) The method of claim 24, wherein

- a) a bacteria strain transformed with a plasmid vector carrying at least one copy of the ^{metA encoding} coding metA sequence under the control of regulatory sequences is used, or
- b) a strain in which the ^{metA encoding} coding metA sequence has been integrated into the bacterial chromosome is used.

29. (Previously presented) The method of claim 24, wherein the ^{metA encoding} coding metA sequence is overexpressed.

30. (Currently amended) The method of claim 24, wherein bacteria are fermented in which additionally at least one further gene of the biosynthetic pathway of L-methionine has been ~~amplified or mutated~~ overexpressed ~~such that its activity is not influenced by metabolic metabolites.~~

JAN. 4. 2007 10:10AM

NO. 4700 P. 8

Application No.: 10/525,674
Amendment Dated January 4, 2007

Docket No.: 13111-00002-US

31. (Previously presented) The method of claim 24, wherein the coryneform bacterium is of the species *Corynebacterium glutamicum*.